AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the

application:

LISTING OF CLAIMS

1-8. (Canceled)

9. (Currently Amended)   A method for expanding a first sequence of data elements

representing successive rows of successive character cells corresponding to a sequence of text

characters to a second sequence of data elements longer than the first sequence, said method

comprising:

receiving a data element representing a row of a text character cell;

forming a horizontal expansion pattern corresponding to the text character based on

character code and row number of the text character cell, the row number being determined based

on the horizontal frequency, the horizontal expansion pattern being set to a specified length,

wherein the horizontal expansion pattern being contained in lookup tables indexed by the

character code and the row number, a separate lookup table being provided for each row;

appending the horizontal expansion pattern to the second sequence of data elements; and

determining whether another data element should be read.

10. (Previously Presented)   A method according to claim 9, wherein;

the specified length is the same for all horizontal expansion patterns comprising the

second sequence of data elements; and

the second sequence of data elements fills a flat panel display.

11. (Cancelled)

12. (Currently Amended) A method according to claim 9 ~~claim 11~~, wherein the lookup table

resides in layer 3 of VGA video RAM.

13. (Previously Presented) A method according to claim 9, wherein:

the data element comprises eight bits; and

the horizontal expansion pattern comprises ten bits.

14. (Currently Amended) A method for expanding a first sequence of data elements representing

successive rows of successive character cells corresponding to a sequence of text characters to a

second sequence of data elements longer than the first sequence, said method comprising:

receiving a plurality of bits representing a plurality of text character cell lines;

determining the character cell row number based on the horizontal frequency;

determining a first bit and a last bit for each data element within the first sequence;

forming a horizontal expansion pattern corresponding to the text character, the horizontal

expansion pattern being set to a specified length, wherein the horizontal expansion pattern being

contained in lookup tables indexed by the character code and the row number, a separate lookup table being provided for each row;

    appending the horizontal expansion pattern to the second sequence of data elements; and

    determining whether another data element should be read.

15. (Previously Presented) A method according to claim 14, wherein said determining the first and last bits for each data element comprises:

    scanning the plurality of bits for repeating bit values at whole number multiples of eight or nine, the bit values corresponding to the background color;

    setting a cell line bit length to the whole number multiples;

    setting the first bit of a data element to the bit following the repeating bit value; and

    setting the last bit of a data element based on the first bit and the cell line bit length.

16. (Cancelled)

17. (Currently Amended) A method according to claim 14 ~~claim 16~~, wherein the lookup table resides in layer 3 of VGA video RAM.

18. (Currently Amended) A method according to claim 14 ~~claim 15~~, further comprising:

    determining whether a horizontal scan for a current row has completed; and

    loading into VGA RAM a lookup table containing horizontal expansion information for the next row when the ~~a~~ horizontal scan has completed.

19-20. (Cancelled)

21. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for expanding a first sequence of data elements representing successive rows of successive character cells corresponding to a sequence of text characters to a second sequence of data elements longer than the first sequence, said method comprising:

    reading a data element representing a row of a text character cell;

    forming a horizontal expansion pattern corresponding to the text character based on character code and row number of the text character cell, the row number being determined based on the horizontal frequency, the horizontal expansion pattern being set to a specified length, wherein the horizontal expansion pattern being contained in lookup tables indexed by the character code and the row number, a separate lookup table being provided for each row;

    appending the horizontal expansion pattern to the second sequence of data elements; and

    determining whether another data element should be read.

22. (Previously Presented)   A program storage device according to claim 21, wherein

    the specified length is the same for all horizontal expansion patterns comprising the second sequence of data elements; and

    the second sequence of data elements fills a flat panel display.

23. (Cancelled)

24. (Currently Amended) A program storage device according to <u>claim 21</u> <s>claim 23</s>, wherein the lookup table resides in layer 3 of VGA video RAM.

25. (Previously Presented) A program storage device according to claim 24, wherein:

the data element comprises eight bits; and

the horizontal expansion pattern comprises ten bits.

26. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for expanding a first sequence of data elements representing successive rows of successive character cells corresponding to a sequence of text characters to a second sequence of data elements longer than the first sequence, said method comprising:

receiving a plurality of bits representing a plurality of text character cell lines;

determining the character cell row number based on the horizontal frequency;

determining a first bit and a last bit for each data element within the first sequence;

forming a horizontal expansion pattern corresponding to the text character, the horizontal expansion pattern being set to a specified length<u>, wherein the horizontal expansion pattern being contained in lookup tables indexed by the character code and the row number, a separate lookup table being provided for each row</u>;

appending the horizontal expansion pattern to the second sequence of data elements; and

determining whether another data element should be read.

27. (Previously Presented) A program storage device according to claim 26, wherein said

determining the first and last bits for each data element comprises:

 scanning the plurality of bits for repeating bit values at whole number multiples of eight

or nine, the bit values corresponding to the background color;

 setting a cell line bit length to the whole number multiples;

 setting the first bit of a data element to the bit following the repeating bit value; and

 setting the last bit of a data element based on the first bit and the cell line bit length.

28. (Cancelled)

29. (Currently Amended) A program storage device according to claim 26 ~~claim 28~~, wherein the

lookup table resides in layer 3 of VGA video RAM.

30. (Currently Amended) An apparatus for expanding a first sequence of data elements

representing successive rows of successive character cells corresponding to a sequence of text

characters to a second sequence of data elements longer than the first sequence, said apparatus

comprising:

 means for receiving a data element representing a row of a text character cell;

 means for forming a horizontal expansion pattern corresponding to the text character

based on character code and row number of the text character cell, the row number being

determined based on the horizontal frequency, the horizontal expansion pattern being set to a

specified length, wherein the horizontal expansion pattern being contained in lookup tables

indexed by the character code and the row number, a separate lookup table being provided for

each row;

means for appending the horizontal expansion pattern to the second sequence of data

elements; and

means for determining whether another data element should be read.

31. (Previously Presented)   An apparatus according to claim 30, wherein;

the specified length is the same for all horizontal expansion patterns comprising the

second sequence of data elements; and

the second sequence of data elements fills a flat panel display.

32. (Cancelled)

33. (Currently Amended) An apparatus according to claim 30 ~~claim 32~~, wherein the lookup table

resides in layer 3 of VGA video RAM.

34. (Previously Presented) An apparatus according to claim 30, wherein:

the data element comprises eight bits; and

the horizontal expansion pattern comprises ten bits.

35. (Currently Amended)   An apparatus for expansion of a first sequence of data elements

representing successive rows of successive character cells corresponding to a sequence of text

characters to a second sequence of data elements longer than the first sequence, said apparatus comprising:

means for receiving a plurality of bits representing a plurality of text character cell lines;

means for determining the character cell row number based on the horizontal frequency;

means for determining a first bit and a last bit for each data element within the first sequence;

means for forming a horizontal expansion pattern corresponding to the text character, the horizontal expansion pattern being set to a specified length, wherein the horizontal expansion pattern being contained in lookup tables indexed by the character code and the row number, a separate lookup table being provided for each row;

means for appending the horizontal expansion pattern to the second sequence of data elements; and

means for determining whether another data element should be read.

36. (Previously Presented)   An apparatus according to claim 35, wherein said means for determining the first and last bits for each data element comprises:

means for scanning the plurality of bits for repeating bit values at whole number multiples of eight or nine, the bit values corresponding to the background color;

means for setting a cell line bit length to the whole number multiples;

means for setting the first bit of a data element to the bit following the repeating bit value; and

means for setting the last bit of a data element based on the first bit and the cell line bit length.

37. (Cancelled)

38. (Currently Amended)   An apparatus according to claim 35 ~~claim 37~~, wherein the lookup table resides in layer 3 of VGA video RAM.

39. (Currently Amended)   An apparatus according to claim 35 ~~claim 36~~, further comprising:

   means for determining whether a horizontal scan <u>for a current row</u> has completed; and

   means for loading into VGA RAM a lookup table containing horizontal expansion information for the next row when <u>the</u> a horizontal scan has completed

40. (Cancelled)

41. (New)   A method according to claim 9, wherein the corresponding lookup table is loaded into the VGA RAM during horizontal blanking.

42. (New)   A method according to claim 9, further comprising:

   determining whether a horizontal scan for a current row has completed; and

   loading into VGA RAM a lookup table containing horizontal expansion information for the next row when the horizontal scan for the current row has completed.

43. (New)   A method according to claim 14, wherein the corresponding lookup table for the next row is loaded into the VGA RAM during horizontal blanking.

44. (New)   A program storage device according to claim 21, wherein the corresponding

lookup table for the next row is loaded into the VGA RAM during horizontal blanking.

45. (New)   A program storage device according to claim 21, wherein said method further

comprising:

    determining whether a horizontal scan for a current row has completed; and

    loading into VGA RAM a lookup table containing horizontal expansion information for

the next row when the horizontal scan for the current row has completed.

46. (New)   A program storage device according to claim 26, wherein the corresponding

lookup table for the next row is loaded into the VGA RAM during horizontal blanking.

47. (New)   A program storage device according to claim 26, wherein said method further

comprising:

    determining whether a horizontal scan for a current row has completed; and

    loading into VGA RAM a lookup table containing horizontal expansion information for

the next row when the horizontal scan for the current row has completed.

48. (New)   An apparatus according to claim 30, wherein the corresponding lookup table for

the next row is loaded into the VGA RAM during horizontal blanking.

49. (New)   An apparatus according to claim 30, further comprising:

means for determining whether a horizontal scan for a current row has completed; and

means for loading into VGA RAM a lookup table containing horizontal expansion

information for the next row when the horizontal scan for the current row has completed.

50. (New)   An apparatus according to claim 35, wherein the corresponding lookup table for

the next row is loaded into the VGA RAM during horizontal blanking.